Dangers and Contraindication of US

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Dangers:-

* **Burns**:- If continuous beam is used and is allowed to remain stationary, excess heat can accumulate in the tissues and eventually leads to burns.

* **Cavitation**:- Especially unstable cavitation is dangerous.

* **Overdose**:- Excessive dose may cause an exacerbation of symptoms.

* **Danger to equipment**:- If the treatment head is held in the air while switched on, the reflection of the beam back into the treatment head may set-up standing waves which

could damage the crystal, consequently the head is never turned on unless it is contact with the transmitting material.

Contraindications:-

*** Vascular conditions**:- Conditions such as thrombophlebitis, where insonation may cause emboli to be broken off, are not treated with ultrasound.

* **Acute sepsis**:- An area which presents acute sepsis should be treated cautiously with ultrasound because of the danger of spreading the infection, or in some instances breaking off septic emboli.

*** Radiotherapy**:- Radiotherapy has a devitalizing effect on the tissue, therefore ultrasound is not applied to a radiated area after six months of irradiation.

*** Tumors**:- Tumors are not insonated because they may be stimulated or metastasize.

* **Pregnancy**:- A pregnant uterus is not treated as the insonation may cause damage to the fetus. Consequently during pregnancy the back and abdomen should not be treated.

* **Cardiac disease**:- Patients who have had cardiac disease are treated with low intensities in order to avoid sudden pain, and area such as cervical ganglion and the vagus nerve are avoided because of the risk of cardiac stimulation.

* **Hemorrhage**:- When bleeding is still occurring or has only recently been controlled, such as an enlarging hemarthrosis or hematoma or uncontrolled hemophilia, ultrasound is contraindicated.

* **Severely ischemic tissue**:- Because of the poor heat transfer and possibly greater risk of arterial thrombosis due to statistics and endothelial damage, ultrasound is contraindicated.

* **Nervous system**

* **Implants**

*.**Anesthetic area**

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